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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,444	01/28/2004	Stefan Enderle	34938-73184	3591
23643	7590	06/20/2005	EXAMINER	
BARNES & THORNBURG 11 SOUTH MERIDIAN INDIANAPOLIS, IN 46204			MCELHENY JR, DONALD E	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/766,444

Applicant(s)

ENDERLE ET AL.

Examiner

Donald E. McElheny, Jr.

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/20/04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

1. The disclosure is objected to because of the following informalities: The specification lacks proper headings, and the written specification lacks proper reference numerals for descriptive features in the written specification where they correspond with their elements in the drawings, the drawings likewise lack proper reference numerals and correlation to written description content, and the abstract lacks proper descriptive content of a statutory subject matter invention.

Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).

Art Unit: 2857

- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

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Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are

solved by the applicant's invention. This item may also be titled "Background Art."

- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if

Art Unit: 2857

an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The

abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The drawings are objected to for reasons set forth by the Office Draftsperson on form PTO-948. Submission of corrected formal drawings is required in response to this office action or this application will be held abandoned.

Applicant is reminded that each and every claim element must be found in the drawings as required by 37 CFR 1.83(a), 1.84(h) & (j), and MPEP 608.02(d), and also the drawings and specification must describe, show and correspond for all components shown or discussed as required by 37 CFR 1.84(p). The drawings must show every feature of the invention specified in the claims, including not only claimed structure but also all method, algorithm and program related steps within some form of flowchart(s). For mathematical related algorithms see 37 CFR 1.84(d). If a lack of correspondence between the claims and figures is merely a matter of applicant using different language in the claims than that found in the figures, then the intended correlation, basis and support for their equivalence must be shown for where claim elements exist within the figures and written disclosure.

Furthermore, the various depicted items must be referenced by reference numerals and corresponding numerals occur in the written description where the shown subject matter is described in the written specification. All material items depicted in the figures must be referenced in the written specification, and vice-versa.

If amendment of the figures is required then note no new matter is permitted to be added to the drawings.

Applicant is advised that when submitting a proposed drawing correction any proposal by applicant for amendment of the drawings to cure defects must consist of two parts:

- a) A separate letter to the Draftsman in accordance with MPEP 608.02(r); and
- b) A print or pen-and-ink sketch showing changes in red ink in accordance with MPEP 608.02(v).

Appropriate and timely correction of the drawings is required in response to this Office action or the application will be held abandoned.

3. The following is a quotation of the second and fourth paragraphs of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

4. Claims 35-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, and under 112 fourth paragraph, as being an improper dependent claims.

These claims are not drawn to the subject matter of their parent claim and then further restrict such, but are drawn to a different combination that then incorporates features of a referenced parent claim. They may even be drawn to a different statutory

invention class under 101, and possibly even to different and restrictable inventions altogether -- their improprieties make such difficult, if not impossible, to determine at this time. The intended combinations of limitations from the apparent mix of claims content is not clear and definite, especially between claims drawn to or requiring different statutory classes of subject matter under 35. U.S.C. 101. The claims are therefore indefinite under 112 second paragraph as to what they are actually drawn to and requiring for limitations (e.g. method steps required for apparatus claims, vice-versus, etc.). Nevertheless applicants are warned that they should submit new independent claims that the originally submitted and acted upon claim 1 has been elected by its original presentation. Should any new independent claims be submitted drawn to subject matter such as either a method of traffic control, or a device for safeguarding an aircraft, such appear to be distinct inventions not requiring all limitations of originally presented claim 1, and also such claims would be directed to subject matter that could be practiced for other purposes and motivations, and potentially require different searches. Applicants should keep the original presented invention of claim 1 in mind when presenting any amendments and make sure only claims to that invention are presented.

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-56 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena), or mere data that is for presentation purposes only (i.e. printed matter), that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. Even for a process claim, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, claim 1 and its dependent claims are directed to a "A representation" that at best reads on printed matter or display information type subject matter, and since no clear mention of even such physical form is required the claims are broader and read on mere abstract ideas. Any intended relationships are either potentially only in the mind of a human, or of printed matter basis per se.

Even considering the improper dependent claims, the methods still appear to read at best on mental steps or the ideas in the abstract. Likewise for the improper dependent claim 56 drawn to a "device"; its limitations are still drawn to data content only.

Even if applicants were to explicitly recite in the claims a computer implemented embodiment, consider the following remarks. The computer implemented steps and their data do not explicitly require any real world sensor measurements, and at best are

met as being of documented human observations of their specified subject matter data, as such claims would still avoid any clear and explicit real world interaction or tying the claimed invention to any technological art or environment. Due to applicants' careful avoidance of any requirement of real world sensors and their measurements, or even of on-site measurements by a human entered into some log book or other type database, all data could possibly even be theoretical or simulated in nature, or merely performed in the mind of an observer, and thus involve strictly abstract idea concepts. Applicants' specification gives alternatives that include arguably non-computer implemented embodiments, but even where a computer implemented invention is supported such may still be of such nature that the computer is acting as only a storage and presentation device for mere data and its presentation to enable a user to make abstract related business (i.e. "presentation") decisions that have no physical real world technological arts connection. Thus the claims also lack the above required second criteria of a concrete tangible result with that real world use. Even if the use of a computer were explicitly and positively claimed, the use of such for mere holding and presentation of data, much as a book would serve, still does not provide a "safe harbor" under the computer implemented "Guidelines" requirements. The mere storage and presentation of descriptive (including non-functional and functional in nature) or non-descriptive data alone has historically in the courts and U.S. Patent practice, and as set forth in the Office "Guidelines" for computer-implemented inventions, been found not patentable subject matter even when such data is presented by or stored on a well known apparatus, process, or product; the basic examples typically given in such

analysis are copyrightable materials and works of art such as involving printed or displayed matter literary or musical in nature.

See MPEP 2106, and the above reference "Guidelines" also referenced in the MPEP and available at the U.S. Patent & Trademark Internet web site.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Zheng et al. (6,456,226), Levanon (6,078,284) or McBride (5,978,744).

As far as can be determined from the improper claims and indeterminate statutory and indefinite subject matter of the originally presented (and amended by preliminary amendment) claims, and from a review of the filed specification, these references are applied as examples of the typical variety of art that is deemed to meet

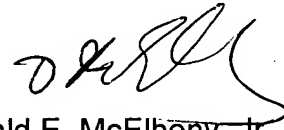
the claimed subject matter. All teach the presentation of geographic information to a user where the data includes an associated second data component to accuracy or reliability indicator of a first data component that is displayed. Note the claims do not positively state that all data components are displayed to a user, or in some common display image. Nevertheless the prior art teaches the display of both on a common screen. Many of the references explicitly teach the displayed data to be of elevation or altitude in a geographic grid format where there is included the indicator of error component (i.e. accuracy or reliability) of the elevation or altitude data. The use of the various mathematical manipulations of the data is taught in the prior art cited, but note such claimed features have no patentable weight in an article item (such as a map) claim, as such a product looks the same as any other and thus such an item per se cannot be determined what methods were used in its creation.

10. Other prior art cited is also pertinent in meeting most, or all, of the apparent claimed subject matter. These teach various manners of displaying the associated information to a user. Note that even images used in the references as examples for discussion of data associations also meet the claimed subject matter, whether used in a finished hardware product or not.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald McElheny, Jr. whose telephone number is 571-272-2218. The examiner can normally be reached on Monday-Thursday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoff Marc, can be reached on weekdays at telephone number 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Donald E. McElheny, Jr.
Primary Examiner
Art Unit 2857